

WHAT IS CLAIMED:

- 1 1. A fluid supply system for supplying a first fluid or a
- 2 second fluid to a press, the fluid supply system comprising:
- 3 a first supply line plumbed to supply the first fluid to the
- 4 press;
- 5 a first supply valve in said first supply line to control
- 6 flow in the first supply line;
- 7 a second supply line plumbed to supply the second fluid to
- 8 the press;
- 9 a second supply valve in said second supply line to control
- 10 flow in the second supply line;
- 11 a first return line connected to drain fluid from the press;
- 12 a conduit in communication with said first and second supply
- 13 lines and said first return line; and
- 14 a conduit valve in said conduit to control flow through the
- 15 conduit, wherein opening the conduit valve enables fluid from the
- 16 first or the second supply line through the conduit to by-pass
- 17 the press.

1 2. The fluid supply system of claim 1, further comprising:
2 a programmable logic controller connected to actuate at
3 least one of said first supply valve, second supply valve, and
4 conduit valve to control fluid flow through the fluid supply
5 system.

1 3. The fluid supply system of claim 2, further comprising:
2 a pump in communication with said programmable logic
3 controller, said pump further being connected to at least one of
4 said first supply line, said second supply line, said first
5 return line and said second return line for selectively moving
6 fluid therethrough.

1 4. The fluid supply system of claim 3, further comprising:
2 a first fluid supply line adapted to be connected to a first
3 fluid supply source;
4 a first fluid return line adapted to be connected to said
5 first fluid supply source;
6 a second fluid supply line adapted to be connected to a
7 second fluid supply source; and

8 a second fluid return line adapted to be connected to said
9 second fluid supply source.

1 5. The fluid supply system of claim 2, further comprising a
2 first sensor means electrically connected to said programmable
3 logic controller for detecting a fluid level in a first fluid
4 supply source.

1 6. The fluid supply system of claim 2, further comprising
2 second sensor means electrically connected to said programmable
3 logic controller, for detecting a fluid level in said second
4 fluid supply source.

1 7. The fluid supply system of claim 5, wherein said first
2 sensor means is a non-contact level sensor.

1 8. The fluid supply system of claim 6, wherein said second
2 sensor means is a non-contact level sensor.

1 9. The fluid supply system of claim 2, wherein said conduit
2 valve is electrically connected to said programmable logic
3 controller.

1 10. The fluid supply system of claim 3, further comprising:
2 a cleaning fluid supply source for containing cleaning
3 fluid, said cleaning fluid supply source being connected to said
4 pump, said cleaning fluid supply source in combination with said
5 pump being adapted to circulate water in a predetermined manner
6 through at least two of said first supply line, said second
7 supply line, said first return line, said second return line,
8 said supply tube, said drain tube, and said conduit.

1 11. The fluid supply system of claim 9, wherein cleaning fluid
2 in said cleaning fluid supply source is maintained at a
3 predetermined elevated temperature by a heating element.

1 12. The fluid supply system of claim 11, wherein said first
2 supply line is thermally coupled to said cleaning fluid of said
3 cleaning fluid supply source for selectively heating said first
4 fluid.

1 13. The fluid supply system of claim 11, wherein said second
2 supply line is thermally coupled to said cleaning fluid of said

3 cleaning fluid supply source for selectively heating said second
4 fluid.

1 14. The fluid supply system of claim 1, wherein said first fluid
2 is aqueous fluid, and said second fluid is a fluid that is
3 reactive to ultra-violet light.

1 15. The fluid supply system of claim 9, wherein when said
2 conduit valve means is positioned to allow cleaning fluid from a
3 cleaning fluid source to be pumped by a pump through said first
4 supply line, said first valve member, said conduit, said supply
5 tube and said drain tube to clean the fluid supply system.

1 16. A method of supplying fluid to a press, said method
2 comprising the steps of:

3 supplying a first fluid to and from said press via a supply
4 tube and a drain tube respectively, said supply tube and said
5 drain tube being connected by a conduit means, said conduit means
6 comprising a first valve in a closed position;

7 stopping the supply of said first fluid

8 draining said first fluid from said press via said drain
9 tube;

10 switching from said first fluid to a cleaning fluid;
11 adjusting said conduit means to an open position which
12 allows fluid flow therethrough;
13 supplying said cleaning fluid through said supply tube, said
14 drain tube and said conduit means;
15 stopping the supply of said cleaning fluid;
16 draining said cleaning fluid from said supply tube, said
17 drain tube and said conduit means;
18 switching from said cleaning fluid to a second fluid;
19 placing said first valve in a closed position to prevent
20 fluid flow therethrough; and
21 supplying a second fluid to and from said press via said
22 supply tube and said drain tube.

1 17. The method of claim 16, further comprising the step of
2 stopping the supply of said second fluid.

1 18. The method of claim 17, further comprising the step of
2 draining said second fluid from said press via said drain tube.

1 19. The method of claim 18, wherein said method is repeated
2 after said step of draining said second fluid from said press.

1 20. The method of claim 18, further comprising the steps of:
2 switching from said second fluid to said cleaning fluid;
3 adjusting said conduit means to allow fluid flow
4 therethrough;
5 supplying said cleaning fluid through said supply tube, said
6 drain tube and said conduit means;
7 8 stopping the supply of said cleaning fluid; and
draining said cleaning fluid.

1 21. The method of claim 16, wherein said conduit means further
2 comprises a second valve.

1 22. A fluid supply structure, comprising:
2 a container bung adapted to fit in a lid portion of a
3 container;
4 a fluid supply line for supplying a fluid from said
5 container to a printing system, attached and extending through
6 said container bung into said container;
7 a fluid return line, for returning a fluid to said container
8 from a printing system, attached to and having a portion
9 extending through said container bung into said container; and

PATENT APPLICATION
Docket No. 08556-15USPT

10 a sensor, positioned on said container bung adapted to
11 measure a fluid level in said container.

1 23. The fluid supply structure of claim 22, wherein said fluid
2 return line has a plurality of slots on the portion extended
3 through said container bung for dissipating gases from said fluid
4 line to aid the minimization of foaming of said fluid.